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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,649	01/08/2002	Seung Hee Han	217966US2X	9152

22850 7590 04/02/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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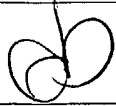
MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	Application No. 10/038,649	Applicant(s) HAN ET AL. 	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____ |
|---|--|

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102 and § 103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 1753

4. Claims<sup>1a2</sup> are rejected under 35 U.S.C. 102(b) as being clearly anticipated by DUNDER (5,443,800). DUNDER's invention is directed to an electronic control circuit for controlling the ozone production of an ozone generator. DUNDER discloses that an apparatus for generating ozone comprises the recited means for providing oxygen; the recited means for generating ozone by applying electrical discharge to the oxygen provided by the means for providing oxygen; the recited means for providing a first pulse signal wherein the first pulse signal is used for the electrical discharge and has an adjusted ON/OFF time ratio; and the recited means for transforming the first pulse from the first pulse provision means into a predetermined signal level (col. 1, lines 49-58; col. 4, lines 4-16, lines 43-48 and lines 53-58; col. 5, lines 4-21; col. 5, line 57 through col. 6, line 29; and Figs. 3-4). DUNDER further discloses in col. 5, lines 21-28 the amount of ozone generated during the first time period is proportional to the number of pulses in the train of pulses passed by the pulse train gate means during the first time period to thereby provide accurate control of the amount of ozone being generated.

5. Claims 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over DUNDER '800. The differences between DUNDER as applied

above and the instant claims are the limitations recited in each of the instant claims.

As to the subject matter of claims 3 and 4, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings because the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus itself. *Ex parte Wikdahl* 10 USPQ 2d 1546 (BPAI 1989); *Ex parte McCullough* 7 USPQ 2d 1889 (BPAI 1988); *In re Finterswalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235 (CCPA 1967).

As to the subject matter of claim 8, DUNDER discloses the limitation in col. 6, lines 45-54.

As to the subject matter of claim 9, the selection of any of known equivalent transforming means would have been within the level of ordinary skill in the art.


6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over DUNDER '800 in view of SUZUKI et al. (5,417,936), a reference cited in a previous Office action. The differences between DUNDER as applied above and the instant claims are the provisions of a flat shaped insulating material on the

electrodes and a cooling means as recited in claim 5. SUZUKI shows in an ozone generator the above provisions are known (Fig. 5) and his ozone generator (Fig.1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified DUNDER's teachings as shown by SUZUKI because the selection of any of known equivalent ozone generators would have been within the level of ordinary skill in the art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kishor Mayekar  
Primary Examiner  
Art Unit 1753